



# AURORA HighLIGHTS

Vol. 1, No. 2 November, 2000 a newsletter for members of Aurora

## A Few Words from the Director

Well, it's official! We are now the Aurora Learning Community Association (ALCA), recognized by the State of Oklahoma as a non-profit professional association. More on this in our next newsletter.

We appreciate you finishing your GeogWeb activities. We are also excited about you moving to field test your lessons. We cannot over emphasize this being accomplished this school year. This will allow us to make the lessons available to Aurora's virtual communities.

You will have a few teachers in San Antonio, San Diego, throughout Oklahoma, and several universities wanting to use the lessons starting



Gary Sacket

this spring, but all of them this next school year. Also teachers in Texas, Louisiana, Arkansas, New Mexico and Oklahoma, through the SouthCentral RTEC, will be using your activities.

I have been helping Tammy Price update the lessons and I am very excited about the work you are doing. The activities are simply going to make learning fun for students. Example: Mark VanMeter is Fairview's new Alternative Education teacher. As a result of feedback from his students, they are actually wanting to do Aurora activities during their breaks between other school work. The kids really love doing this stuff and so does their teacher!

This is just one example out of thousands that will come. You developers and partners should feel excited about the impact you are having now and in the future on learners and their communities. I certainly am!

## Memorable Quotes – *What People Are Saying About the Aurora Project*

“For a teacher, Aurora is not something where you have to shift gears. You can just add Aurora's components on to the lessons you already have.” – Jackie Quevas, Southwest Educational Development Laboratory (SEDL)

“Aurora provides teachers a way to keep from teaching in isolation. It helps them connect their kids with others across Oklahoma and the United States. The end result is more quality learning as opposed to just learning facts.” – Dr. Sheila Barnes, Northwestern Oklahoma State University

“If you think of the intensity of all the intakes of information and statistics, I think the Aurora Project is very, very rare.” – Rodger Harris, Oklahoma Historical Society

“Aurora makes students more aware of their place in the world. They are not very different from others and yet they are unique. Before, they might think they are a nobody from a nobody town.” – Toni Pickle, Pioneer Communications

“This is the way education is supposed to be. The curriculum is from the teachers. It makes education *real*.” – Terry Lovelace, Cameron University

“The neat thing about Aurora is that it makes students take ownership for their own learning.” – Marie Poole, Clinton High School

“Aurora helps students be critical thinkers because the activities involve inquiry-based investigations.” – Dr. Suzanne Spradling, Oklahoma State University

“No one else has charted this path.” – Geography Specialist, Association of American Geographers ARGUS Project

“I don't think teachers are realizing that this curriculum is all about exploring. It's about uploading, analyzing, and comparing data.” – Terry Sacket, Enid High School

“Students (who use the Aurora curriculum) will have more contact with the real world, with the people who are out there working in the types of jobs that the students might be doing once they've graduated. Students will be using the Internet, not just searching around hitting sites, but using it for a purpose.” – Andrea Melvin, Oklahoma Climatological Survey and Mesonet Project

# Partners Help Make It All Possible

- The highly acclaimed Association of American Geographers (ARGUS) Project served as the model for the Aurora Project.
- Specializing in Apple's WebObjects programming, GammaStream Technologies, Inc. is actively developing Aurora's software applications.
- Environmental Systems Research Institution, Inc. (ESRI) provided the Geography Information System (GIS) software bundle ArcView for use in the GeogWeb curriculum.
- Digital orthoquads (aerial photographs), which cover all areas of the state, are available on the GeogWeb server, thanks to the Oklahoma Conservation Commission.
- In order to allow documentation of any community's infrastructure, the Oklahoma Department of Commerce is working with Aurora to integrate its Capital Improvement Planning (GeoCIP) program into the GeogWeb curriculum.
- Another partner, the Oklahoma Water Resources Board manages the Water Watch Program, which enables people across the state to conduct water tests and submit the results monthly; the GeogWeb Curriculum Center is used extensively by teachers in this learning activity.
- Consultants at Apple serve as technical advisors for Aurora.
- The Oklahoma Climatological Survey provides Mesonet data to Aurora teachers for use in developing meteorology curriculum.
- To ensure quality curriculum and evaluation standards, Aurora's over 700 activities are continually being monitored by Oklahoma Department of Education curriculum specialists Dr. Tillman Ragan and Dr. Pat Smith, from the University of Oklahoma.
- As part of their technology training in Methods classes, seventeen Oklahoma State University future teachers are writing GeogWeb lesson plans and activities.
- After securing a \$1.6 million "Preparing Tomorrow's Teachers to Use Technology" grant, Northwestern Oklahoma State University is integrating Aurora's GeogWeb server across its campus, to be used by all teacher education faculty. One goal is to ensure field-based real-life teaching experiences for 21<sup>st</sup> Century teachers.
- The Oklahoma Historical Society is creating virtual museums in order for GeogWeb users to use material from society archives.
- Oklahoma's Department of Career and Technology Education helps Aurora train teachers across the state.
- An original Aurora partner, Southwestern Oklahoma State University includes classroom instruction in the use and development of GeogWeb components, both at the university and in school sites throughout Western Oklahoma.
- For the Aurora Project, Pioneer Telephone contributes technical expertise, especially in rural schools.
- Providing links to courts, libraries, hospitals, government agencies, and educational institutions across the state is the OneNet telecommunications and information network.
- Professionals from the Oklahoma Advancement of Geographic Education (OKAGE) serve as trainers to teachers on incorporating geographic standards into Aurora activities.
- Southwest Educational Development Laboratory (SEDL) is the U.S. Department of Education's Regional Educational Laboratory contractor for a five-state area, providing research, development, and dissemination services for countless projects, including the Aurora Project.

## Getting Down to the Nitty Gritty

Pryor Middle School librarian Dolphyne McCullah is the kind of facilitator everyone would like to have. For instance, she says that when she first heard of the Aurora Project she felt overwhelmed, yet she soon became one of its most ardent supporters.

“At first I thought it was more than we could ever get off the ground,” she explains. “We had people talking to us about (parts of) the project that entailed different states and things that would take years to develop. I just thought, ‘Oh, my, what do they want us to do?’”

“Then we finally got down to the nitty gritty and they told us they wanted us to use things we used every day in our classrooms. Then it was okay.”

McCullah says she really likes working on the Aurora Project and helping facilitate the Pryor teachers, any Southwestern Oklahoma State University instructors, and the Clinton Aurora teachers.

“I help edit and give advice when needed,” she says. “I look at the activity to see that every section is filled out. It needs to read as well as possible.”

“The goals have to be aligned with instructions and assessment, and the teacher’s notes have to make sense. It has to have engaging questions for students as they follow along on the activities. I have to make sure there are national geography standards and



*At Aurora’s fall conference at Rose State College, Dolphyne McCullah shares tips for developers.*

*Pryor Middle School teacher Dolphyne McCullah says she knows firsthand that the Aurora curriculum is not mundane. “It’s new ideas, sharing the data over the Internet.”*

PASS standards. I also look at the grammar and spelling to see if that is okay.”

At that point in looking over the activities, McCullah says it is the responsibility of the Peer Facilitator to turn the stage on the lesson’s status to yellow, indicating that the activity rubrics, data forms, and assessments are ready to be checked by other Aurora staff.

Having developed ten activities and tools herself, McCullah says she knows firsthand that the Aurora curriculum is not mundane. “It’s new ideas, sharing the data over the Internet,” she says, noting that the shared information can be almost anything – figures, charts, graphs, pictures, essays – anything accessible and assessable.

“I think where we’re going to see the most excitement is from the kids, from the students seeing their work on the Internet and seeing other people use it,” she concludes. “That’s the exciting thing about Aurora.”

### **Dolphyne’s Tips for Activity/ Tool Developers:**

- Write a clear, attention-getting abstract, mentioning what will be compared in the data forms.
- List measurable goals, using words such as *describe*, *demonstrate*, *list* or *identify*, not words such as *understand* or *have knowledge of*, which are not measurable.
- Give specific step-by-step instructions on how to proceed toward attaining the goal(s).

## ***Discovering the Wonders of Nature***

If you want to do a class activity that encourages parental involvement and creates a memorable learning experience for your students, you need to peruse Shannon McCoy's second grade GeogWeb lesson entitled "How Can We Enhance Community Wildlife?"

To introduce the study of native wildlife, the Jenks, Oklahoma, Southwest Elementary teacher took her class out to the school playground to do a survey of the animals there. "We looked around for thirty minutes for all the different animals or creatures we could find, and we saw ten ants and two birds," McCoy said. "There were only two trees, and we couldn't find any animals."

Next McCoy scheduled a field trip to a nearby wildlife preserve and sought involvement from the parents, eventually enlisting one adult for every two students.

"We went to Rentie Grove Preserve, which has a creek and hundreds of trees," McCoy said. "We wore old, old clothes, and took plastic containers, clipboards, cameras, and thermometers. We crawled through the creek and captured insects and bugs and minnows, which we then put back into the creek." Everything was great about the day, she said, except for one big obstacle – rain!

"It hadn't rained in months, and then there was a huge thunderstorm. We got muddy and wet," she laughed, "so we went back to the school and changed our clothes and had hot chocolate in our classroom."



***Second graders at Southeast Elementary School in Jenks learn how to survey the creatures on their playground before comparing the results with those found in a nearby area. Teacher Shannon McCoy enjoys the parental involvement in Aurora activities such as this one.***

The hands-on activity was invaluable as a learning experience, McCoy said, because the kids learned about their own environment while discovering the wonders of the animals' natural habitat. In addition, they increased their knowledge of such creatures as bugs, insects, birds, frogs, and fish. They even discussed cats (since they saw one near the creek) and deer (after they followed some deer tracks they found in the woods).

After counting the number of creatures and animals found both on the playground and at the preserve, they made a graph comparing and contrasting the results. Later they drew pictures depicting the activity.

"It was good for the kids," McCoy said. "I was thinking of it as a one-time event, but the kids and parents came back asking when we were going to do it again. The parents loved it."

## NWOSU Builds Bridge for Tomorrow's Teachers

Since June Northwestern Oklahoma State University has been building a bridge which Dr. Sheila Barnes, NWOSU professor of education, predicts will close the gap between future teachers (in college) and students who are in grades kindergarten through twelve in Oklahoma.

"There is a digital divide," she explains, "between the colleges and the schools, especially the schools that are economically and culturally diverse. We want to begin to work with those schools, to use technology for interaction and to bring them into another learning community."

That community is Aurora, a learning community that Barnes has made available for all faculty at NWOSU, through a \$1.6 million "Preparing Tomorrow's Teachers for Technology" grant.

Faculty members at the university have been "ready to go," Barnes says, and in fact, "are already going beyond our expectations."

As an example, she cites one professor, Marty Gibson, who already has her reading classes interacting with children in K-12 classes.

The major goal of the NWOSU PT3 grant, according to Barnes, is to redesign all teacher education courses, infusing them with technology and ensuring real-life learning experiences through collaboration with the Aurora Project and the Hardesty and Boswell Public Schools.



*During a recent retreat, NWOSU faculty discuss and reflect on the integration of standards and technology within their courses.*

The three-year PT3 project begins with the professional education staff, then moves in year two to include subject area faculty, and finally takes in professors from the general education courses.

***"There is a digital divide between the colleges and the schools, especially the schools that are economically and culturally diverse."***

Redesigned around rigorous standards, the courses will all be systemic, part of a system that professors can use campus-wide to help in class management and in the creation and execution of exciting new methods of teaching.

To Barnes, the teacher education course redesign, with its focus on technology, is the biggest selling point of the project. She says professors will help extend the Aurora curriculum from K – 16, as college students share and

compare information with people in other places. The new focus will be on real-life learning, connections through the Internet, and data gathered from local and other multiple sources.

Thus far, money from the PT3 grant has provided materials and equipment for the professional education staff. Additionally, after the installation of the Aurora server, several training workshops have been conducted.

Barnes, who consults and oversees the progress of the grant, also co-teaches classes at the university.

Her efforts are definitely helping build a powerful bridge for tomorrow's teachers and technology. Even more important, though, faculty members at Northwestern are helping their students cross the bridge with ease.

## Aurora Personality – Let’s Meet Sue Ayn Moore



*Finishing their writing assignment and getting ready for their favorite part of Mrs. Sue Ayn Moore’s science class, the Interactive TV work, are Felicia Angel, Monique Bowens, and Rebecca Vasquez, all from Clinton.*

“When my dolphin made eye contact with me and let me hug her, I just knew there was a God. It was so emotional. It made such an impact on me that I couldn’t even talk about it for six months without crying.”

Those are the words of Sue Ayn Moore, Clinton, Oklahoma, Middle School science teacher, who gets excited when describing various experiences she has had as a teacher.

The wild dolphin episode occurred several years ago, when Moore was selected to attend an outdoor learning laboratory at the Marine Resource Center in Key Largo, Florida. She also has tales to tell about training with astronauts at NASA in Houston and mentoring in a statewide program involving teachers who are “burned out” or lack motivation to continue the difficult task of teaching.

But to get Moore really excited about science, a listener has only to mention technology in the classroom. That will get her going! Besides actively participating in the Aurora Project and Mesonet’s “Earth Storm” project, Moore has for nine years utilized distance learning as part of the Oklahoma Science Teachers’ Association “Integrated Science” Program.

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*“We were working with the Mesonet in our classroom in Clinton even before the news stations got to use it.”*

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“The IS program is basically what changed my life,” she says, explaining that she must re-apply each year to work in the 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade project, written by teachers and conducted through the University of Alabama.

A trainer, Moore has conducted Integrated Science workshops in Georgia, Florida, Mississippi, Louisiana, Texas, and Montreal, Canada. At the workshops the teachers are required to model and practice science activities, which they then take back to their individual classrooms.

Students in Moore’s classes work via interactive television, just as they do in the Earth Storm Project; consequently, Moore’s students get to learn from experts.

“We have access to the University of Alabama,” Moore says, “and my students can also talk and ask questions about the weather from people who are in meteorology at OU or ask questions about agriculture from people at OSU. We were working with the Mesonet in our classroom in Clinton even before the news stations got to use it.”

After recently securing a grant, Moore has a new television set connected to her computer and is using her technology/data expertise in her Aurora Project work.

She spent the summer doing editing on Aurora performance assessments and rubrics. Additionally, she wrote activities and helped create a guide for new developers. All her own activities have been tried out in her classroom, and she has even informally tested some activities of other Aurora developers.

Moore likes everything about Aurora, especially the easy access to resources and data, and the chance to compare that data with people in distant places. In fact,

(see “Sue Ayn” on page 7)

("Sue Ayn" continued)

she would love to share Aurora through the Integrated Science program.

"The message would go out to 10,000 schools throughout the US and Canada," she says. "I want teachers in other states all geared up so their kids can compare data with our kids. I've traveled extensively in 26 other states, and when I go into schools in some states, I see computers in every classroom. And they are computers

that are traded in for new ones every two years. Our kids are the smartest kids in the world, and they deserve everything they can get to keep up."

Moore, who chose to give up a lucrative career as a corporate accountant to become a teacher and who has achieved National Board Certification status, is one educator who is doing everything possible to see that her students do more than just "keep up."

*Enjoying the diverse cultures found at Rose State College's Global Village are these Aurora Community members: Frontier teachers Cate Harrison and Marian Shiever, at right, and Jonette Ellis (Enid), Rebecca Zittle (project evaluator), and Gail Herth (Saint Eugene, Oklahoma City), below.*



## Aurora Overview

Beginning as a vision involving only a few people and six schools across the state, Aurora has grown in three years to include over six hundred educators in schools, homes, colleges, and universities in several states. Additionally, many public and private organizations and agencies have joined the learning community known as Aurora.

The creation of this vast interactive learning community was formidable, with Web site creation the first task. The site had to be able to provide ready access for the collection or presentation of authentic data, in a seamless, interdisciplinary format that would work equally well for technology specialists or computer novices.

The only way a Web site of such flexibility and magnitude could be built was for its creation and that of the activities to occur simultaneously. Thus, teachers, content specialists, scientists, and others had to begin writing the Aurora curriculum while getting and giving constant feedback on the process.

Throughout the past three years of the five-year, \$5.45 million grant, Aurora has provided countless teacher training sessions, aimed primarily at activity development in all areas of the curriculum. Quality control has remained paramount in the overall project, as Web and software creation continue.

Presently the Aurora community is busy field testing and evaluating over 700 activities that have been developed thus far. Community members, eagerly watching their creations being used by others, are relishing the collaboration of ideas. Each day Aurora's vision is growing brighter.

**Aurora's curriculum is on the Web.**  
<http://www.auroraok.org>

# Aurora Calendar

November 28 – Board/PF Meeting  
 December – no meetings  
 January 23, 2001– Board/PF Meeting  
 February 23 – Board/PF Meeting, Rose State  
 February 24 – Winter Conference, Rose State  
 March – no meetings  
 April 3 – Board/PF Meeting  
 May 1 – Board/PF Meeting  
 June 12 – Board/PF Meeting  
 July 10 – Board/PF Meeting

All meetings are at Bishop McGuinness High School in Oklahoma City, unless otherwise listed.

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# AURORA HighLIGHTS

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Aurora Partners – Bishop McGuinness High School and other Oklahoma City Catholic schools, plus the following public schools: Enid, Fairview, Frontier, Hugo, Jenks, Pryor, Clinton, and Dover. Southwestern Oklahoma State University is Aurora’s higher education institution partner.

Also, partnering with Aurora are Pioneer Telephone Cooperative and Southwest Educational Development Laboratory.

Other contributors and cooperating agencies include: Oklahoma Geography Information Systems Council, Oklahoma Climatological Survey and the Mesonet Project, Oklahoma Advancement of Geographic Education, Oklahoma Water Resources Board, Oklahoma Geological Survey, OneNet, Association of American Geographers ARGUS Project, Oklahoma Historical Society, Oklahoma Department of Education, Oklahoma Conservation Commission, United States Geological Survey, Oklahoma State University, Northwestern Oklahoma State University, Environmental Systems Research Institution, Oklahoma Department of Career and Technology Education, GammaStream Technologies, Inc., and the Oklahoma Department of Commerce.

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